REMARKS

Claims 1, 3-11, and 13-25 are pending in the application.

Applicants and Applicants' attorney representatives wish to acknowledge with appreciation the telephone interview granted by the Office. Examiner Vo was kind enough to conduct the telephonic interview with the co-inventor and his attorney representatives on June 15, 2005 in an attempt to further the prosecution of the application. In particular, the differences between the present invention and the cited reference of US patent no. 6,625,320 to Nilsson et al., hereinafter "Nilsson", were discussed.

Claims 1-6, 9-11, and 13-19 are rejected under 35 U.S.C. § 102(e) as anticipated by Nilsson. Claims 1 and 9 are independent. Applicants traverse this rejection.

Claim 1 provides a system for transcoding compressed video signals, including a plurality of pictures. The system includes a decoder to completely or partially decode an input compressed video signal, a look-ahead estimator, and an encoder. The look-ahead estimator gathers information from the input compressed video signal prior to input to the decoder to estimate future signal characteristics of one or more future incoming pictures, and gathers information from the decoder to estimate current signal characteristics of a current picture. The encoder compresses the reconstructed video signal according to a coding scheme derived from the current and future signal characteristics from the look-ahead estimator.

Nilsson discloses a transcoder having a decoder for decoding a received video signal and an encoder including motion estimation means for generating motion compensation information. The received signal is coded according to a first coding scheme employing motion compensation, and comprises coded data and motion

compensation information, and the encoder encodes the output of the decoder according to a second coding scheme employing motion compensation. The transcoder is for use where at least some frames are coded using motion-compensated inter-frame predictive coding based on a reference frame which is not the same in the second coding scheme as it is in the first coding scheme. The transcoder generates an estimated motion vector for a current frame of the video signal, and receives, when processing vectors for a current frame, vectors which, in the received signal, accompany at least one other frame of the video signal. (col. 2, lines 44-67)

The Examiner erroneously states that the motion estimator 31 shown in FIG. 3 of Nilsson discloses the look-ahead estimator recited in claim 1. The Examiner further incorrectly states that motion vectors MV1 and MV'1 shown in FIG. 3 are information from an input compressed signal prior to the decoder.

As discussed in the enclosed Rule 132 Declaration by Dr. Ligang Lu, the motion estimator of Nilsson does not disclose or suggest the look-ahead estimator of claim 1. Furthermore, as also discussed in the Declaration, motion vectors MV1 and MV'1 are not information from a compressed signal prior to decoding, because MV1 and MV'2, which are part of either an MPEG or H.261-type coding, must necessarily be de-coded to extract motion vector information.

In addition, the Examiner states that "at least one other frame" mentioned in col. 2, lines 65-66, is inherently a future frame. As discussed in the Declaration, Nilsson, which discloses motion estimation, does not disclose or suggest a future frame as recited in claim 1, because motion estimation disclosed in Nilsson utilizes only current and previously decoded frames.

Therefore, Nilsson does not disclose or suggest a system for transcoding compressed video signals, including a "look-ahead estimator to gather information from said input compressed video signal prior to input to said decoder to estimate future signal characteristics of one or more future incoming pictures, and to gather information

from said decoder to estimate current signal characteristics of a current picture," as recited in claim 1. Thus, Nilsson neither describes nor suggests that which is recited in claim 1.

Claim 9 recites elements similar to those recited in claim 1. For at least reasoning similar to that provided in support of the patentability of claim 1, claim 9 is patentable over Nilsson.

Claims 2-6 depend from claim 1. Claims 10, 11 and 13-19 depend from claim 9. For at least reasoning similar to that provided in support of the patentability of claims 1 and 9, claims 2-6, 10, 11 and 13-19 are patentable over Nilsson.

For the above reasons, the rejection of claims 1-6, 9-11, and 13-19 under U.S.C. § 102(e) as anticipated by Nilsson is overcome. Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-6, 9-11, and 13-19.

Claims 7-8 and 20-25 are rejected under 35 U.S.C. § 103(a) as unpatentable over Nilsson in view of US Patent No. 5,889,561 to Kwok et al., hereinafter "Kwok". Applicants traverse this rejection.

As discussed above, Nilsson does not disclose or suggest a system for transcoding compressed video signals, including a "look-ahead estimator to gather information from said input compressed video signal prior to input to said decoder to estimate future signal characteristics of one or more future incoming pictures, and to gather information from said decoder to estimate current signal characteristics of a current picture," as recited in claim 1. Thus, Nilsson does not describe or suggest claim 1.

Kwok discloses a method and apparatus for re-scaling compressed MPEG-encoded video signals from a higher to a lower bit rate. The re-scaling disclosed in Kwok is performed within the current picture only after the input signal for the current

picture has been at least partially decoded (col. 2, lines 10-16). In all embodiments, a coded video signal input to Kwok's apparatus must be at least partially decoded within the decoder prior to re-scaling and re-quantizing.

Therefore, Kwok also does not disclose or suggest a system for transcoding compressed video signals, including a "look-ahead estimator to gather information from said input compressed video signal prior to input to said decoder to estimate future signal characteristics of one or more future incoming pictures, and to gather information from said decoder to estimate current signal characteristics of a current picture," as recited in claim 1.

Thus, Nilsson and Kwok, whether considered alone or in combination, fail to disclose or suggest the elements of claim 1. Therefore, claim 1 is patentable over the cited combination of Nillson and Kwok.

Claim 9 recites elements similar to those recited in claim 1. For at least reasoning similar to that provided in support of the patentability of claim 1, claim 9 is patentable over the cited combination of Nilsson and Kwok.
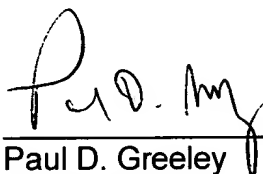
Claims 7-8 depend from claim 1. Claims 20-25 depend from claim 9. For at least reasoning similar to that provided in support of the patentability of claims 1 and 9, claims 7-8 and 20-25 are patentable over the cited combination of Nilsson and Kwok.

For the above reasons, the rejection of claims 7-8 and 20-25 under U.S.C. § 103(a) as unpatentable over Nilsson in view of Kwok is overcome. Applicants respectfully request reconsideration and withdrawal of the rejection of claims 7-8 and 20-25.

An indication of the allowability of all pending claims by issuance of a Notice of Allowability is earnestly solicited.

Respectfully submitted,

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